

V. A Letter from Dr. Wallis to Dr. Sloan, Secretary to the Royal Society, concerning some supposed Alteration of the Meridian Line ; which may affect the Declination of the Magnetical Needle, and the Poles Elevation.

Oxford, June 21. 1699.

SIR,

I Received (two days since) a Letter (to me directed) from an unknown Person (without any name Subscribed, or mention of the Place from whence,) containing a Suggestion about some *Variation* of the *Meridian Line*, (which, if so, may consequently affect the variation of the *Magnetick Needle*, and the Elevation of the *Pole*,) which he desires may be Communicated ; and is *Verbatim*, as followeth,

" For the Reverend Dr. John Wallis Geometry Professor in Oxford, these, June 12, 99. Sir, This comes
 " from one who is no stranger to your Abilities, though
 " unknown to your Person ; however I presume on a
 " Minute of your Leisure, without any further Apology, than that I hope it may tend to promote a
 " Point of Learning. Upon Reading the *Philosophical
 Transaction*, Num. 241. And as I was wondering how
 " an ordinary Mathematician could miss so easy a thing
 " as the drawing a true *Meridian*, I hit upon a Thought,
 " that *Meridians* must needs vary ; but whether in such
 " manner, and proportion, as appears in the Instance
 " of that *Transaction*, I am not able to determine :
 " Having contented my self with such skill in Astrono-
 " my as serves only to contemplate the wonderful Fa-
 " brick of the visible Heavens, without adding so much
 " Geome-

“ Geometry and Arithmetick, as are needful for making Calculations. What I would offer, is this, Taking for granted that the Earth moves, &c. You know, that besides the Diurnal and Annual Revolutions, there must also be a Third, to account for that slow Motion of the fixed Stars, upon the *Poles of the Ecliptick*, in about 25000 Years; which is solved by the direction of the Earth’s Axis from one Point to another of the Polar Circle. And that direction being nothing but a certain wabble in the Earth’s Motion, must needs make the Noon-shade of a Perpendicular not lye always in the same Line. I would request, that this hint might be improved in one of the next *Transactions*, if I were sure that it were not a Blunder. But if so, I have this to excuse, that I have not made it tedious. *I am, Sir, your most humble Servant.*

Now, this being a new Suggestion, and which (if well grounded) may be of considerable consequence (both as to the Declination of the *Magnetick Needle*, and the *Poles Elevation*,) and therefore deserving to be well considered: And, it not being very probable, that so careful a Man as *Ticho*, and those concerned in the Church of St. *Petronio* (mentioned in the *Transactions*, Num. 241.) should be so much mistaken in the *Meridian Line*: I thought fit to recommend it (as is desired) to your consideration, and (thereby) to the Thoughts of others. But, if there be ought of this nature; it must arise from a change of the *Terrestrial Poles* (here on Earth) of the Earths Diurnal Motion; (not of their pointing to this or that of the fixed Stars:) For, if the Poles of this Diurnal Motion remain fixed to the same place on the Earth; the Meridians (which pass through these Poles) must remain the same.

Your Humble Servant,

John Wallis.

VI. An